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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/295,830	04/21/99	HEINLE	H 1-21294

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EXAMINER

VANAMAN, F

ART UNIT

PAPER NUMBER

3611

DATE MAILED:

07/31/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/295,830

Applicant(s)
Heinle et al.

Examiner
Frank Vanaman

Group Art Unit
3611



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-13 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-13 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Apr 21, 1999 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4, 5

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the air permeable plate (claim 10) and a tractor (claims 11, 12, 13) having a sloping hood (claim 11), with the radiators installed at a forward end thereof and having major faces facing in the direction of tractor movement (claim 12), and the rearward most radiator being the cooling water radiator (claim 13), must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Specification

3. The abstract of the disclosure is objected to because of the following informality: on line 1, "eg" should be --e.g.,--. Correction is required. See MPEP § 608.01(b).
4. The disclosure is objected to because of the following informalities: on the final two lines of page 1 and lines 4-7 of page 2, the reference to the claims should be deleted, note that the material in the claims is subject to change.

Appropriate correction is required.

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: claims 12 and 13 refer to an agricultural tractor having a sloping hood, wherein forward and rearward radiators are positioned such that their major faces face in the traveling direction of the tractor, the arrangement located at a front end of the tractor. The specification, however, fails to disclose these limitations. Note, for example, page 2, lines 19-24,

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and page 3, lines 20-22, which refer in general to the positioning of the arrangement on a vehicle at a front thereof, but otherwise fail to provide support for the claimed subject matter.

Claim Objections

6. Claims 7, 8, and 11-13 are objected to because of the following informalities: In claim 7 line 2; claim 8, lines 2 and 3; claim 12, lines 2, 5, and 6; and claim 13, lines 1 and 2 “the said” should be either --the-- or --said--; in claims 11-13, the preambles do not match the preambles of the claims from which they depend. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, the term “such as” renders the claim indefinite in that it cannot be discerned what is or is not to be considered part of the claimed invention; in claim 8, lines 2-3, the claim lacks a clear antecedent basis for the radiator to be pivotally mounted, similarly in claim 8, lines 3-4, the claim lacks a clear antecedent for “the common support”, note that claim 8 depends from claim 3; in claims 11-13, the scope is unclear: claims 1 and 2, from which claim 11 depends, refer to an arrangement for cooling, suggesting a sub-combination, whereas claims 11-13 refer in addition to a tractor, suggesting a combination; in claim 12, numerous terms lack a clear antecedent basis in the claims: “the front”, “the forward end”; “the direction of movement”, etc.; in claim 13, line 2, there is no clear antecedent basis for the cooling water radiator.

All claims should be carefully reviewed and revised for clarity under 35 USC §112, second paragraph, with care being taken to clearly indicate the scope of the claims and to provide antecedent basis for the recited terms.

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Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Bentz et al. (US 3,921,603). Bentz et al. teach a cooling arrangement (16) in a tractor, having at least three radiators (21, 22, 25) mounted together to form a chamber, the radiators forming three sides of the chamber.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 2, 5, 6, 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bentz et al. in view of Kunze et al. (US 4,160,487). Bentz et al. teach a cooling arrangement (16) in a tractor, having at least three radiators (21, 22, 25) mounted together to form a chamber, the radiators forming three sides of the chamber. The reference to Bentz et al. fails to teach the chamber bounded on all sides by radiators or walls, mounted on a common support including a base and upstanding bracket, with at least one water cooling radiator mounted to the upstanding bracket with a seal. Kunze et al. teach a cooling arrangement for a tractor, comprising a pair of radiators (5, 5) through which water or other engine cooling fluid is run (figure 2), mounted in a chamber (4) defined by the radiators and walls (e.g., 8, 9, 13), the radiators mounted to a common support (lower portion of 4, above conduit 25, figure 3), and further mounted to an

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upstanding bracket (proximate 23), with air-tight seals (16). It would have been obvious to one of ordinary skill in the art at the time of the invention to mount the cooling radiators taught by Bentz et al. in a chamber having bounding walls, on a common support as taught by Kunze et al. for the purpose of providing an installation having substantial structural integrity. Further it would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of sealing members as taught by Kunze et al. in the mounting of the radiators to the chamber for the purpose of ensuring that the greatest possible air-flow occurs through the radiators, thus enhancing heat transfer.

13. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bentz et al. in view of Cambeis (DE 24,065). The reference of Bentz et al. is discussed above and fails to teach at least one radiator being releasably, pivotally mounted with respect to the remaining radiators. Cambeis teaches a radiator (3) mounted in a chamber (1) for pivotal motion (through 5) it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a pivotal mounting as taught by Cambeis for at least one of the radiators taught by Bentz et al., for the purpose of allowing access to the interior of the chamber.

14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bentz et al. as modified by Cambeis as applied to claim 3 above, and further in view of Kunze et al. The references of Bentz et al. and Cambeis are discussed above and fail to teach the non-pivotal radiators as being sealingly mounted to a common support. Kunze et al. teach a cooling arrangement for a tractor, comprising a pair of radiators mounted in a chamber, the radiators mounted to a common support (lower portion of 4, above conduit 25, figure 3), and further mounted to an upstanding bracket (proximate 23), with air-tight seals (16). It would have been obvious to one of ordinary skill in the art at the time of the invention to mount the cooling radiators taught by Bentz et al. as modified by Cambeis on a common support as taught by Kunze

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et al. for the purpose of providing an installation having substantial structural integrity. Further it would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of sealing members as taught by Kunze et al. in the mounting of the radiators for the purpose of ensuring that the greatest possible air-flow occurs through the radiators, thus enhancing heat transfer.

15. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bentz et al. as modified by Kunze et al. as applied to claim 6 above, and further in view of Attinger (GB 2,234,721). The references of Bentz et al. and Kunze et al. are discussed above and fail to teach two radiators connected to the common support with a plug and socket connection and retaining screws. Attinger teaches a common radiator mounting connection wherein a radiator (1) is mounted to a frame (6/16) with plug (3) and socket (4/5) at one end and at least one retaining screw (11) at the other. It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the plug and socket and retaining screw mounting scheme taught by Attinger to mount the radiators of Bentz et al. as modified by Kunze et al. for the purpose of allowing a simplified installation and removal.

16. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bentz et al. as modified by Kunze et al. as applied to claim 2 above, and further in view of Berth et al. (US 4,339,014). The references of Bentz et al. and Kunze et al. are discussed above, and fail to teach one of the walls aside from the radiators as comprising an air permeable plate. Berth et al. teach a cooling arrangement for a tractor having a chamber portion (4) at least two radiators (6, 7) and one plate-shaped wall portion (22) formed from an air permeable material. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide at least one of the walls of the chamber structure of Bentz et al. as modified by Kunze et al. with an air permeable

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plate shaped element as taught by Berth et al., for the purpose of introducing a quantity of unheated exterior air into the chamber

17. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bentz et al. as modified by Kunze et al. and Berth et al. as applied to claim 10 above, and further in view of Weizenburger et al. (US 5,234,051). The references of Bentz et al., Kunze et al. and Berth et al. are discussed above and fail to teach the cooling arrangement as being located in a front of a tractor having a sloping hood, with at least two radiators having major faces which face the direction of traveling of the vehicle, and wherein a rear radiator is a cooling water radiator. Weizenburger et al. teach a cooling arrangement for a tractor having a hood portion (13) with a sloping front (note particularly figure 1a) wherein a cooling arrangement having plural radiators (7, 6, 4/3/5) arranged with major faces facing in the traveling direction of the tractor, and wherein a water cooling radiator (3) is located in a rearward position. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the cooling arrangement taught by Bentz et al. as modified by Kunze et al. and Berth et al. in a forward location of a vehicle such as taught by Weizenburger et al. having a sloping hood, and orienting major faces of the radiators to face a direction of travel, for the purpose of taking advantage of the relative air movement associated with forward motion of the tractor to enhance heat transfer; further it would have been obvious to one of ordinary skill in the art at the time of the invention to locate the water cooling radiator in a rearward position to allow other radiators (such as a refrigerant condenser) the advantage of contacting the least-heated circulating air (note Weizenburger et al. at col. 3, lines 27-43).

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Belaieff et al. (US 2,236,461), Bentz et al. (US 3,203,499), Staebler (US 4,116,265),

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Moranne (US 4,315,540), Morinaka et al. (US 4,632,206), Bassett (US 4,771,844), Boll et al. (US 5,046,550), and Glesmann (US 5,492,167) teach cooling structures and vehicles of pertinence.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Vanaman whose telephone number is (703) 308-0424. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-1113.

Any response to this action should be mailed to:

Assistant Commissioner for Patents
Washington, DC 20231

or faxed to :

(703) 305-3597 or 305-7687 (for formal communications intended for entry;
informal or draft communications may be faxed to the same number but should be
clearly labeled "UNOFFICIAL" or "DRAFT")

FRANK B. VANAMAN
Patent Examiner
Art Unit 3611

July 26, 2000

Handwritten signature of Frank B. Vanaman, dated 7/26/00.